

WHAT IS CLAIMED IS

1. An electrochemical sensor for determining the concentration of a constituent present in a solution or in a liquid of natural or biological origin, formed by a tongue of small dimensions including a thin plastic substrate supporting at least two current conducting strips separated by a narrow insulating strip of the substrate, said  
5 substrate and said strips being covered with a plastic covering into which are cut, at one end an opening allowing portions of strip to appear for connection to an electronic apparatus and close to the other end two windows separated by a strip of the covering, said windows delimiting on the strips the useful surfaces of a reference electrode beneath a first window and a measuring electrode beneath a second window  
10 intended to be coated with a specific reactant of the constituent whose concentration one wishes to determine, wherein at least the measuring window has an oblong contour in the direction of the tongue.
2. An electrochemical sensor according to claim 1, wherein the reference window also has an oblong contour in the direction of the tongue.
- 15 3. An electrochemical sensor according to claim 2, wherein the measuring window and the reference window are symmetrical with respect to the narrow insulating strip separating the conducting strips.
4. An electrochemical sensor according to claim 3, wherein the measuring window and the reference window have a coffee bean configuration.
- 20 5. An electrochemical sensor according to claim 1 for determining the level of glucose in the blood, wherein the specific reactant contains at least glucose oxidase and a chemical mediator able to transfer the electrons.
6. An electrochemical sensor according to claim 5, wherein the mediator is selected from among the mono, bis or tris 2-2' ruthenium, osmium or vanadium  
25 bipyridine complexes in which at least one of the bipyridine ligands is substituted by at least one electron donor group.
7. An electrochemical sensor according to claim 1, wherein the specific reactant is deposited by pipetting in the measuring window.